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APR 03 2008

TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.  
ITL.1005US

Re Application Of: Kenneth E. Salsman

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/675,648	September 30, 2003	Mahmoud Fatahi Yar	47795	2629	5824

Invention: Driving Liquid Crystal Materials Using Low Voltages

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:  
February 7, 2008

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Dated: March 28, 2008

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor/Applicant:

Kenneth E. Salsman

Serial No.: 10/675,648

Filed: September 30, 2003

For: Driving Liquid Crystal Materials  
Using Low Voltages

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Art Unit: 2629

Examiner: Mahmoud Fatahi Yar

Atty Docket: ITL.1005US  
(P16610)

Assignee: Intel Corporation

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**APPEAL BRIEF**

04/03/2008 HDESTA1 00000013 10675648

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Nancy Meshkoff

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### **REAL PARTY IN INTEREST**

The real party in interest is the assignee Intel Corporation.

**RELATED APPEALS AND INTERFERENCES**

None.

### **STATUS OF CLAIMS**

Claims 1-3 (Rejected).

Claim 4 (Canceled).

Claims 5-9 (Rejected).

Claims 10-26 (Canceled).

Claims 27-30 (Rejected).

Claim 31 (Canceled).

Claims 1-3, 5-9, and 27-30 are rejected and claims 2 and 28 only are the subject of this Appeal Brief.

### **STATUS OF AMENDMENTS**

No amendments were made in the Reply to Final Rejection submitted on December 13, 2007. All amendments have therefore been entered.

## **SUMMARY OF CLAIMED SUBJECT MATTER**

In the following discussion, the independent claims are read on one of many possible embodiments without limiting the claims:

1. A method comprising:  
providing a signal to a liquid crystal cell (Fig. 4, 100); and  
driving a data electrode of the liquid crystal cell without using a voltage greater than 3.3 volts (Spec. at p. 3, lines 16-20).
2. The method of claim 1, wherein providing the signal comprises providing a pulse width modulated signal (Spec. at p. 3, lines 8-10).
27. An article comprising a machine-readable storage medium containing instructions that if executed enable a system to:  
form a signal;  
provide the signal to a liquid crystal cell; and  
drive a data electrode of the liquid crystal cell without using a voltage greater than 3.3 volts (Spec. at p. 3, lines 16-20).
28. The article of claim 27, further comprising instructions that if executed enable the system to drive the liquid crystal cell with a pulse width modulated signal (Spec. at p. 3, lines 8-10).

At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.



**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

- A. Whether claims 2 and 28 are indefinite under 35 U.S.C. § 112, second paragraph for failing to particularly point out and distinctly claim the subject matter of the invention.**
- B. Whether claims 2 and 28 are unpatentable under 35 U.S.C. § 103(a) over Liu (US 2003/0147029) in view of Fujii (US 7,071,929).**

## **ARGUMENT**

**A. Whether claims 2 and 28 are indefinite under 35 U.S.C. § 112, second paragraph for failing to particularly point out and distinctly claim the subject matter of the invention.**

Claims 2 and 28 were rejected under § 112, second paragraph as being indefinite. It is asserted that “providing a signal to a liquid crystal cell” is vague, indefinite, and incomplete. It is respectfully submitted that there is no such thing as incompleteness and any rejection premised on such a theory is nonstatutory. Further, it is suggested that it is unclear because it is not clear what “it” refers. It is also asked “[w]hat establishes or what this signal is consisted of is unclear”. It is also asserted that “it is not clear how or in response to what or what element or means is responsible for generating this signal”.

As explained in MPEP 2173.04, breadth is not indefiniteness. As explained therein, if the scope of the subject matter embraced by the claim is clear, and if applicants have not otherwise indicated that they intend the invention to be of different scope from that defined in the claims, then the claims comply with § 112, second paragraph.

It is respectfully submitted that all of these points are irrelevant. The language is clear. Anyone skilled in the art would know what a signal is and what a liquid crystal cell is and how to provide a signal. The details are unrequired to understand it. The concept is so simple that no one skilled in the art could ever have trouble with it. The assertion that all kinds of details are needed is baseless. The claim limitation is only indefinite if it cannot be understood. The nature of the signal is of no relevance. Anyone skilled in the art would know if they were providing a signal to a liquid crystal cell. That is because they know what each of the words in that clause means. All the details on how you do that are not what is claimed and are not what the applicant regards as an invention. It does not matter what establishes the signal or what the signal consists of. It does not matter how or in response to what or what element or means is responsible for generating the signal. What generates the signal is a non-method limitation and is of no consequence.

Therefore the rejection should be reversed.

**B. Whether claims 2 and 28 are unpatentable under 35 U.S.C. § 103(a) over Liu (US 2003/0147029) in view of Fujii (US 7,071,929).**

In order to use pulse width modulation in a liquid crystal display, you need a faster response time than is available with conventional arrangements. See present application at page 1, lines 6-17. Such faster response time may be achieved, in some embodiments of the present invention, through the provision of a small cell gap on the order of one micron. See the present application at page 9. Moreover, the small cell gap may also allow lowering the necessary driving voltage.

While the cell gap is not claimed (since it depends on specific circumstances), no reference teaches any way to enable the use of such low voltages, as claimed in a pulse width modulated system.

Thus, the question is would it be obvious to combine Fujii, alleged to teach a pulse width modulation system, presumably with a conventional set up, with Liu, which is cited as teaching using driving voltages less than 3.3 volts. The problem is that neither reference teaches any way to use both low drive voltages and a pulse width modulation system. Liu does not teach any way to get the response time needed for pulse width modulation at low voltages. Fujii does not teach any way to use pulse width modulation at low voltages.

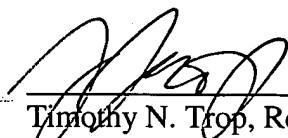
Thus, the combination of the two references leaves one skilled in the art with nowhere to go and no way to get there. Therefore, the rejection should be reversed.

\* \* \*

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: March 28, 2008

  
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## **CLAIMS APPENDIX**

The claims on appeal are:

1. A method comprising:  
providing a signal to a liquid crystal cell; and  
driving a data electrode of the liquid crystal cell without using a voltage greater than 3.3 volts.
2. The method of claim 1, wherein providing the signal comprises providing a pulse width modulated signal.
27. An article comprising a machine-readable storage medium containing instructions that if executed enable a system to:  
form a signal;  
provide the signal to a liquid crystal cell; and  
drive a data electrode of the liquid crystal cell without using a voltage greater than 3.3 volts.
28. The article of claim 27, further comprising instructions that if executed enable the system to drive the liquid crystal cell with a pulse width modulated signal.

## **EVIDENCE APPENDIX**

None.

**RELATED PROCEEDINGS APPENDIX**

None.